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AMENDMENTS TO THE CLAIMS

1. (Original) A method for analyzing an organelle-localized protein~~, which enables one~~ to determine whether or not a test protein localizes to an organelle, ~~and~~ said method comprises ~~the following steps~~:

(a) ~~a step of~~ introducing a fusion peptide (a), which comprises one half-peptide of an intein, one half-peptide of a fluorescent protein and an organelle-targeting signal peptide, into a eukaryotic cell;

(b) ~~a step of~~ introducing a test protein bound to a fusion peptide (b), which comprises the other half-peptide of the fluorescent protein ~~and~~, the other half-peptide of the intein, and a test protein, into the eukaryotic cell; and

(c) ~~a step of~~ detecting a fluorescence signal emitted by the fluorescent protein.

2. (Currently amended) The method of Claim 1, wherein~~,~~:

in step (a), two or more types of fusion peptide (a) are introduced into the eukaryotic cell~~, each comprising~~, wherein each fusion peptide (a) comprises one half-peptide of ~~different~~ the fluorescent ~~proteins~~ protein and the organelle targeting signal peptide, wherein the fluorescent protein has a different signal characteristic from other fluorescent proteins and the organelle targeting signal peptide targets a different organelle from other signal peptides~~and different organelle targeting signal peptides, are introduced into a eukaryotic cell~~;

in step (b), two or more types of fusion peptides (b) are introduced into the eukaryotic cell, wherein each fusion peptide (b) comprises~~, each comprising~~ the other half-peptide of the ~~different~~ fluorescent ~~proteins~~ protein and a test protein different from each other~~, and each bound to a test protein, is introduced into the eukaryotic cell~~; and

in step (c), the fluorescent signal is detected.

3. (Currently amended) The method of Claim 1, wherein, in step (a), the fusion peptide (a) is introduced into ~~a~~ the eukaryotic cell by transfecting a recombinant vector (A), which expresses the fusion peptide (a), into the eukaryotic cell.

4. (Currently amended) The ~~analysis~~ method of Claim 1, wherein, in step (b), ~~the test protein and~~ the fusion peptide (b) ~~are~~ is introduced into ~~a~~ the eukaryotic cell by transfecting a recombinant vector (B), which expresses the fusion peptide (b) ~~and the test protein as a unit~~, into the eukaryotic cell.

5. (Original) A fusion peptide (a), which comprises a half-peptide of an intein, a half-peptide of a fluorescent protein and an organelle targeting signal peptide.

6. (Canceled)

7. (Currently amended) A recombinant vector (A), which expresses ~~a~~ the fusion peptide (a) of Claim 5 ~~comprising a half-peptide of an intein, a half-peptide of a fluorescent protein and an organelle targeting signal peptide~~.

8. (Canceled)

9. (Currently amended) A ~~probe~~ set of fusion peptides for analyzing an organelle-localized protein, ~~comprising the fusion peptide (a) of Claim 5.~~, which comprises:

a fusion peptide (a) comprising a half-peptide of an intein, a half-peptide of a fluorescent protein and an organelle targeting signal peptide; and

a fusion peptide (b) comprising a half-peptide of a fluorescent protein, a half-peptide of an intein and a test protein.

10. (Currently amended) The ~~probe set according to~~ set of fusion peptides of Claim 9, ~~wherein~~ which comprises:

~~the fusion peptide (a) or the fusion peptide (a) expressed by the recombinant vector (A) comprises two or more types of fusion peptides, each fusion peptide comprising one half peptide of a fluorescent protein having different signal characteristics and a different organelle targeting signal peptide~~two or more types of fusion peptides (a), wherein each fusion peptide (a) comprises one half-peptide of the fluorescent protein and the organelle targeting signal peptide, wherein the fluorescent protein has a different signal characteristic from other fluorescent proteins and the organelle targeting signal peptide targets a different organelle from other signal peptides; and

~~the fusion peptide (b) comprises~~ two or more types of fusion peptides (b), wherein each fusion peptide (b) ~~comprising~~ comprises the other half of the fluorescent protein and the test protein different from each other.

11. (Currently amended) A eukaryotic cell~~, containing~~ comprising a fusion peptide (a), which comprises a half-peptide of an intein, a half-peptide of a fluorescent protein and an organelle targeting signal peptide.

12. (Currently amended) A cell kit[[,]] comprising two or more of the eukaryotic cells of Claim 11.

13. (Currently amended) A eukaryotic cell[[,]] comprising two or more types of fusion peptide (a), wherein each fusion peptide (a) comprises a half-peptide of an intein, a ~~one~~ half-peptide of a fluorescent protein and an organelle targeting signal peptide, wherein the fluorescent protein of each fusion peptide (a) ~~have~~ has a different signal characteristics from other fluorescent proteins and the organelle targeting signal peptide of each fusion peptide (a) ~~target~~ targets a different organelle from other signal peptides.

14. (Currently amended) A cell kit[[,]] comprising two or more of the eukaryotic cells of Claim 13.

15-20. (Canceled)

21. (New) A set of recombinant vectors for analyzing organelle-localized proteins, comprising:

a recombinant vector (A) expressing a fusion peptide (a), that comprises a half-peptide of an intein, a half-peptide of a fluorescent protein and an organelle targeting signal peptide; and

a recombinant vector (B) expressing a fusion peptide (b), that comprises a half-peptide of a fluorescent protein, a half-peptide of an intein, and a test protein bound thereto.

22. (New) The set of recombinant vectors of Claim 21, wherein:

the recombinant vector (A) expresses two or more types of fusion peptides, each fusion peptide comprising one half-peptide of a fluorescent protein and an organelle targeting signal peptide, the fluorescent protein has a different signal characteristic from other fluorescent proteins and the organelle targeting signal peptide targets a different organelle from other signal peptides; and

the recombinant vector (B) expresses two or more types of fusion peptides, each fusion peptide comprising other half-peptide of the fluorescent protein.

23. (New) A eukaryotic cell comprising a recombinant vector (A) expressing a fusion peptide (a) that comprises a half-peptide of an intein, a half-peptide of a fluorescent protein and an organelle targeting signal peptide.

24. (New) A cell kit comprising two or more of the eukaryotic cells of Claim 23.

25. (New) A eukaryotic cell comprising a recombinant vector (A) expressing two or more types of fusion peptides (a), wherein each fusion peptide (a) comprises a half-peptide of an intein, a half-peptide of a fluorescent protein and an organelle targeting signal peptide, and wherein the fluorescent protein has a different signal characteristic from other fluorescent proteins and the organelle targeting signal peptide targets a different organelle from other signal peptides.

26. (New) A cell kit comprising two or more of the eukaryotic cells of Claim 25.